

CLAIMS

WHAT IS CLAIMED IS:

1. A receiver for processing data, comprising an engine operable to receive a format definition and process data formatted according to the definition, without requiring formatting information in the data.
2. The receiver as recited in claim 1, further configured to receive a broadcast including the data.
3. The receiver as recited in claim 2, wherein the engine is further configured to receive the format definition from the broadcast.
4. The receiver as recited in claim 1, further configured to receive a broadcast including the format definition.
5. The receiver as recited in claim 1, further configured to receive a multicast including the data.

6. The receiver as recited in claim 5, wherein the engine is further configured to receive the format definition from the multicast.

7. The receiver as recited in claim 1, wherein the definition includes a description of a syntax of the format.

5 8. The receiver as recited in claim 7, wherein the definition includes a description of semantics of the format.

9. The receiver as recited in claim 8, wherein the semantic description associates at least one identifier with the data.

10 10. The receiver as recited in claim 8, wherein the syntax and semantics are described in a first language.

11. The receiver as recited in claim 10, wherein the engine is further configured to produce an internal representation of the syntax and semantics.

12. The receiver as recited in claim 11, wherein the engine is further configured to receive a query and use the internal representation to create at least one mask.

13. The receiver as recited in claim 12, wherein the semantic description
5 associates at least one identifier with the data, and the query uses the at least one identifier.

14. The receiver as recited in claim 12, wherein the engine further comprises at least one filter operable to apply the at least one mask to filter the data.

15. The receiver as recited in claim 14, wherein the engine further comprises a
10 filter characteristics object including information about the at least one filter, and wherein the engine is further configured to use the filter information to select at least one filter to apply the at least one mask.

16. The receiver as recited in claim 14, wherein the engine is further configured to forward at least a portion of the filtered data to an application.

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17. The receiver as recited in claim 14, wherein the engine is further configured to produce an additional mask, based on the filtered data.

18. The receiver as recited in claim 14, wherein the engine is further configured to modify the at least one mask, based on the filtered data.

19. The receiver as recited in claim 12, wherein the engine is further configured to receive a second query.

20. The receiver as recited in claim 19, wherein the engine is further configured to create at least one additional mask, based on the second query.

21. The receiver as recited in claim 12, wherein the query is formulated using the first language.

22. The receiver as recited in claim 12, wherein the query is formulated using a second language.

23. The receiver as recited in claim 12, further comprising a mechanism operable to execute an application that formulates the query.

24. The receiver as recited in claim 23, wherein the query is discrete.

25. The receiver as recited in claim 23, wherein the query is continuous.

26. The receiver as recited in claim 8, wherein the syntax is described in a first language and the semantics are described in a second language.

27. The receiver as recited in claim 26, wherein the engine is further configured to produce an internal representation of the syntax and an internal representation of the semantics.

28. The receiver as recited in claim 27, wherein the engine is further configured to receive a query and use the internal representations to create at least one mask.

29. The receiver as recited in claim 28, wherein the semantic description associates at least one identifier with the data, and the query uses the at least one identifier.

30. The receiver as recited in claim 28, wherein the engine further comprises at least one filter operable to apply the at least one mask to filter the data.

31. The receiver as recited in claim 30, wherein the engine further comprises a filter characteristics object including information about the at least one filter, and wherein the engine is further configured to use the filter information to select at least one filter to apply the at least one mask.

32. The receiver as recited in claim 30, wherein the engine is further configured to forward at least a portion of the filtered data to an application.

33. The receiver as recited in claim 30, wherein the engine is further configured to produce an additional mask, based on the filtered data.

34. The receiver as recited in claim 30, wherein the engine is further configured to modify the at least one mask, based on the filtered data.

35. The receiver as recited in claim 28, wherein the engine is further configured to receive a second query.

36. The receiver as recited in claim 35, wherein the engine is further configured to create at least one additional mask, based on the second query.

37. The receiver as recited in claim 28, wherein the query is formulated using at least one of the first language and the second language.

5 38. The receiver as recited in claim 28, wherein the query is formulated using a third language.

39. The receiver as recited in claim 28, further comprising a mechanism operable to execute an application that formulates the query.

40. The receiver as recited in claim 39, wherein the query is discrete.

10 41. The receiver as recited in claim 39, wherein the query is continuous.

42. The receiver as recited in claim 1, wherein the data comprises television-related information.

43. The receiver as recited in claim 42, wherein the data comprises service information.

44. A system for processing formatted data, comprising:
a transmitter configured to transmit a format definition associated with the data; and

a receiver configured to receive the format definition, store a representation of the format definition, and use the representation of the format definition to process data independent of formatting information in the data.

45. The receiver as recited in claim 44, wherein the data comprises television-related information.

46. The receiver as recited in claim 44, wherein the data includes formatting information.

47. The receiver as recited in claim 44, wherein the data excludes formatting information.

48. A system for configuring a data processing engine, comprising a transmitter configured to transmit a data format definition including a syntax definition and a semantics definition.

49. The system as recited in claim 48, wherein the data format definition enables the data processing engine to process non-self-describing data.

50. The system as recited in claim 49, wherein the data omits formatting information.

51. The system as recited in claim 49, wherein the data includes formatting information.

52. The system as recited in claim 48, wherein the data comprises television-related information.

53. A method for updating a generic data processing engine operable to process data independent of formatting information, comprising:

transmitting a syntax definition for a new format definition; and

transmitting a semantics definition for the new format definition.

54. The method as recited in claim 53, wherein the data comprises television-related information.

55. The method as recited in claim 53, wherein the syntax definition and semantics definition are transmitted separately.

56. The method as recited in claim 53, wherein transmitting the syntax definition includes broadcasting the syntax definition.

57. The method as recited in claim 53, wherein transmitting the syntax definition includes multicasting the syntax definition.

58. A computer program product for processing formatted data, comprising a computer usable medium having machine readable code embodied therein for receiving a format definition and processing data formatted according to the definition, without use of formatting information in the data.

59. The computer program product as recited in claim 58, wherein the definition includes a syntax definition of the format.

60. The computer program product as recited in claim 59, wherein the definition includes a semantics definition of the format.

61. The computer program product as recited in claim 60, further configured to produce an internal representation of the syntax and semantics.

5 62. The computer program product as recited in claim 61, further configured to receive a query and use the internal representation to create at least one mask for filtering the data.

63. The computer program product as recited in claim 62, further configured to provide the at least one mask to at least one filter.

10 64. The computer program product as recited in claim 62, further configured to store filtered data returned by the at least one filter.

65. The computer program product as recited in claim 63, further configured to set a mask according to at least a portion of filtered data returned by the at least one filter.

66. The computer program product as recited in claim 63, further configured to modify at least one mask according to at least a portion of filtered data returned by the at least one filter.

67. The computer program product as recited in claim 58, wherein the data includes television-related information.

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